

# Journal of Entrepreneurship & Project Management

**ISSN Online: 2616-8464**



## **Influence of Project Management Practices on Performance of Public Construction Projects in Kamonyi District, Rwanda**

**Ishimwe Marie Aimee & Dr Nkechi Irechukwu Eugenia**

**ISSN: 2616-8464**

# Influence of Project Management Practices on Performance of Public Construction Projects in Kamonyi District, Rwanda

<sup>1\*</sup>Ishimwe Marie Aimee & <sup>2</sup>Dr Nkechi Irechukwu Eugenia

<sup>1</sup>Post graduate student, Mount Kenya University, Rwanda

<sup>2</sup>Lecturer and research coordinator, School of Business, Mount Kenya University, Rwanda

\*Email of the corresponding Author: [ishimwemarieaimee63@gmail.com](mailto:ishimwemarieaimee63@gmail.com)

*How to cite this article:* Aimee, I., M., & Eugenia, N., I. (2022). Influence of Project Management Practices on Performance of Public Construction Projects in Kamonyi District, Rwanda. *Journal of Entrepreneurship & Project Management*, 6 (4), 33-49. <https://doi.org/10.53819/81018102t50104>

## Abstract

The government of Rwanda through the Ministry of Education has targeted to improve education based on science and technology as well as innovation in order to enhance the quality of education. The purpose of this paper therefore, was to establish the influence of project management practices on performance of public construction projects in Kamonyi district of Rwanda. The study employed descriptive and correlation research designs. The study used 133 people as target population. The study conducted a census. Questionnaire and guided interview were used as data collection instruments. The study found that majority, 38.8% of the respondents participates in construction project for the purpose of sustaining their living standard. It was also found that majority, 78.8% of respondents do not make a written project plan. The study also found that majority agreed that there is the provision of the required resources to be used before starting the project. The variables like resource acquisition, resource organization and risk mitigation that make project implementation were found to influence the construction project performance at 35.2% and the remaining 64.8% can be affected by other variables. The study found that the project monitoring and evaluation is ready to affect the construction project performance at 26.7% and the remaining 73.3% can be affected by other variables. The study recommended that managers of different organizations which sponsor projects should continually modify management aspects to improve performance of construction projects.

**Keywords:** *Monitoring and Evaluation, Project Implementation, Project management practices, Project Performance and Project planning, Kamonyi District, Rwanda*

## **1.0 Introduction**

Project management entails a number of components, in order to complete the project's goals within the allocated time, money, and performance metrics, it is necessary to plan, coordinate, monitor, and control project operations (Turner, 2016). All organizations respect the concept of project management, according to Adeyemi (2013), as it is the best method for generating reliable outcomes as well as the project and one of the most significant tools that can help a company achieve greater efficiency. A project's performance is defined as meeting the expectations of the client and all other parties involved, as well as achieving the project's reason (Arslan & Kivrak, 2014). According to Chua, Kog, and Loh (2013), successful project necessitates the creation of a detailed project plan that takes into account the amount of time required as well as the key factors that contribute to the project's success. It assists the project manager and participants in making better decisions and focusing on the project's performance. The tremendous expansion in project work across all sectors and businesses has been one of the most important organizational advancements in recent years (Maylor, 2016).

Projects are utilized all around the world to address issues like as hunger, poor health, and unemployed, which are prevalent in many developing countries' rural areas (International Development Research Centre, 2014). Several countries, places a high value on the execution of construction projects through the ministry of infrastructures. According to Dwyer and Black (2017), the government policy on infrastructure changes in the United Kingdom was founded on basic research that gives evidence-based suggestions based on a comprehensive examination of current enhance better performance in various building projects. In Africa like in Ghana, there is high resource allocation on projection associated with strengthening infrastructures to improve performance (Landau, 2010). The significant budgetary control was due to the fact that construction projects are critical in establishing adequate infrastructure (Landau, 2010). Such functions range from improving food security, creating jobs and generating foreign exchange to supplying raw materials to an industry that reduces poverty and promotes sustainable development, among other things.

In Kenya, government' economy is heavily focusing on promoting infrastructures for better provision of services and improving economic activities (RKNDP, 2012). Agriculture makes a direct commitment of 25% to GDP and indirectly adds another 27% through ties with construction projects and related businesses (KARI, 2014). Communication and management of information is also a key part of project management (Nyende, 2011). The poor management of data on agricultural product marketing has had a significant impact on infrastructure performance. poor rural roads, marketplaces, and transportation infrastructures result in high transaction costs for farmers, as well as lack of availability to input and output markets. In Uganda, as per Ssekandi and Chen (2010)'s appraisal study for area-based on activities involving construction projects in Uganda, the rise of construction projects plays a critical role in poverty reduction. Improvement is one of the policy goals the Ugandan government has set for reducing the country's prevalent poverty. In order to improve administrative performance, the policy was tasked with updating infrastructure, which included the use of strategic planning and digital tracking technologies as well as improving access to data on financing, farm inputs, and market access.

In Rwanda, the problem related to the construction projects performance occur in various aspects mostly in Public construction industry (Pascal, 2020). Therefore, some projects are in failing in cost performance, other in time performance and in other indicators. The inadequate finances have

<https://doi.org/10.53819/81018102t50104>

also affected many developers, causing building projects take long time to complete ((Pascal, 2020). Vision city projects and outsiders, residential construction projects which are the largest housing project complete far behind the schedule and the selling price of the units strong indication of serious delays. There are various projects in Rwanda that complete with poor performance (Abdul-Rahman, *et al.*, 2016). This study therefore, investigated the influence of project management practices on project performance in Rwanda.

### **1.1 Problem Statement**

The rate of project failure in Rwanda and the costs required in the implementation are proportionally high (Mutegi, 2018). This shows that the inadequate planning, monitoring and evaluation of Public constructional project reduce the desired performance. Despite, the government of Rwanda put a lot of effort in extension of infrastructures. According to the East Africa (2017), the attainment of goals and quality of product associated with construction project in Rwanda are still low. There is still a gap in effective management of public construction projects including inadequate budgetary compliant. Tuyishime (2020) revealed that most projects in Rwanda do not meet the planned project activities and budget goals and it is also very rare for a project to be accomplished on budget. Tuyishime (2020) added that 11% of projects indicate to provide poor quality of product and 59% face delays associated with project goal attainment. Monitoring and Evaluation (M&E) tactics in building point out that applying them and learning where Elisante (2018) undertook the study linked to customer assessments of mobile phone services on project performance. This paper, needed to address the management practices and how they could influence the construction of project performance funded by government in Kamonyi District in Rwanda.

### **1.2 Research Objective**

The study sought to investigate the influence of project management practices on performance of public construction projects in Kamonyi District in Rwanda.

## **2.0 Literature Review**

### **2.1 Project Management Practices**

Project management, according to Chandra (2010), is an essential issue in many businesses that acts as a strategy for project development and operation development. Likewise, project management methods are already becoming increasingly relevant in aspects of the economy. This strengthen the behaviors that project managers engage in to ensure the project is completed. According to a World Bank report (2017), executives and governments as well as how to apply the necessary skills, tools, and procedures to project operations, which is critical for achieving the desired results. Endogenous management methods are those used, whereas exogenous practices are those used outside of the institution but have an impact on project performance, such as environmental enablers and political landscape (Grisham, 2016). Project planning is a creative and challenging task that entails determining which and when plans are supposed to be scheduled (Project Management Institute, 2014). It entails planning in order for the project to run successfully. The planning phase must be completed in its entirety because it serves as the foundation for the next step, implementation.

Project planning, according to Taylor (2016), is a road map which might be preceded. It is the most important aspect of project management. The arrangements for the project's flawless launch are included in this phase. Planning process, definition, and evaluation are all part of this creative and demanding endeavor. Implementing a project entail carrying out now and achieving all of the development's planned actions. It comprises 80–85 percent of the project's finances and activity. To successfully complete a project, it requires a combination of techniques, processes, people, and technology (Meredith & Mantel, 2010). Because of its importance, it necessitates extensive coordination, monitoring, and control, as well as the implementation of all project management methodologies. Strategies during this phase. Hiring the requisite talents, training some of the employees who lack such skills, allocating duties, are all part of project execution. Project implementation, resources are acquired, materials are organized, farm workers are trained, extension services are provided to farmers, and farm activities are carried out according to the plan. These actions help to arrange the team's work so that the project can be completed more efficiently.

Monterrey (2012) proposes neighborhood institutions' surveillance systems, necessitates and performance indicators, which lead to proposed integrated methods such as field visits, stakeholder meetings, design documents, and frequent updating. According to Slaymaker and Chapman (2012), enhanced communication that allows project members to gain access to information that can help agriculture programs in disadvantaged distant locations thrive. The ability of ICT to connect rural areas to the global information society, for example, has aided in the removal of obstacles to knowledge and information exchange. According to Walker and Hughes (2019), improving the project environment is also important because it has been shown in the project success. Political, legal, institutional, cultural, social, technological, and security resources, as well as economic, financial, and physical infrastructure, are all environmental conditions.

## **2.2 Project Performance**

Varied academics have used various definitions of project performance. According to Nicolus (2018), project performance is evaluated in relation to project goals, and a project is considered to be successful if its goals are met. According to Kezner (2017), a project is considered to be operating when it has successfully used the given resources to fulfill the project objectives while staying on schedule, within budget, and at the established performance level. According to Pinto and Slevin (2018), project performance is the ability to complete tasks on time, within budget, and with the desirable level, safety, and cost. Burke (2019) provides a rather more up-to-date definition of performance as project success, which includes finishing the project within the allotted timeframe. Burke provided a definition, and this study used it because it is more current and covers all relevant components of project performance (Burke, 2019). As a result, this study evaluated performance using the different indicators: adherence to the budget, achievement of project objectives, output amount, and customer satisfaction.

Project developers are frequently concerned about building cost overruns and setbacks, and numerous studies have been conducted to determine the root reasons of these types of performance concerns. Kenya's real estate market has recently undergone considerable growth, with designers creating a variety of building and design ideas to appeal to and meet the needs of a wide range of clients. The idea of gated community housing projects has been fully adopted by various

stakeholders in this industry. According to Landman (2012), gated communities are housing estates with perimeter walls around them and strict entry for inhabitants' cars.

### **2.3 Project management practices and project performance**

The procedures used by project managers to ensure a project's success include initiating, planning, carrying out, observing and evaluating, and establishing communication channels (Harvey, 2015). These procedures are essential to any project since they help complete work properly and within set parameters for money, timeline, and quality. According to Miller and Lessard (2011), an organization can successfully execute a construction project thanks to its various project management techniques. According to Skeggs (2011), several project management techniques have an impact on project performance and are pertinent to the construction sector. But according to Skeggs (2011), when an Index Index is used, the major practices that affect how well projects work include scheduling, communication, surveillance, and appraisal, group dynamics management, as well as planning and scheduling. Project managers are required to be skilled in all of these areas since they have a considerable impact on how well projects are delivered. These practices include project planning, resource scheduling, evaluation and monitoring, and project communicating.

As per Crivelli and Gupta (2013), timing of available resources comprises arranging those resources in a way that ensures successful project completion. Miller and Lessard (2011) assert that financial resources are crucial for building projects since project operators need them to purchase the tools and machinery they need. In addition to the physical and financial resources, the management and scheduling of the project's human resources is essential to the success of the endeavors (Kihoro & Waiganjo, 2015). Project monitoring and evaluation (M&E), according to Harrison (2018), entails the "regular gathering and analysis of information to follow the progress of a project." The monitoring and evaluation component of construction projects, according to Mambo and Chiragu (2013), is essential.

#### **2.3.1 Project planning and project performance**

Risk manager's mediating effect and culture's mediating effect were taken into consideration in Naeem, et al (2018) did a study to examine the impact of project planning on the success of projects in Sub-Saharan African Countries (SSAC). It was shown that competent project planning at the early phases of the project life cycle had a considerable impact on the success of the said projects, establishing a positive correlation between project success and schematic design.

#### **2.3.2 Project implementation and project performance**

As per Christen and Pearce (2015), bloated government has hampered the implementation of policies pertaining to issues of food security. The study's conclusions demonstrate that excessive regulation may raise the cost of lending, deterring borrowers from financial institutions and impeding the successful completion of projects. These restrictions slow down the loan application procedure for farmers, which will increase the likelihood that 50% of the initiatives will fail during execution. Eventually, this will result in low food production and high high unemployment. According to Project Management Institute (2013), an educated society is more likely to follow management groups' setting up plans correctly since they are able to comprehend and put to use the provided agricultural activities. In order to attain project outputs and outcomes, dynamic project activities demand reasonably trained people that can collaborate objectively. There is

evidence that suggests men can succeed in the workplace with less education than do their responsible female.

The underpinning theory of project execution, study's conclusions show that dispatching is divided into two parts according to the underlying idea of project execution. The initial step is choosing a task from among those specified jobs that are prepared for execution for a workstation. The second step is telling the work station about the assignment. The study also shows that in the case of project management, much of the judgment is handled during the planning process, which reduces dispatching to simple communication or approving the start of activity.

### **2.3.3 Monitoring and evaluation and project performance**

According to Joe and Nay's (2014) study, monitoring is a technique used to gather and analyze project data, inform the project implementation process, and typically feed back into the project's effective management. It was further established that, in addition to assisting with project feedback and institutional learning, the data and information from the M&E process were crucial in the identification of projects and programs. As a result, M&E is a crucial component in the accomplishment of construction projects and offers helpful data to facilitate project delivery and profitability. The adoption of participatory M&E systems in neighborhood projects in South Africa was examined in Ngatia's (2016) study there. The study discovered that M&E was a crucial component of the success of such programs and that there were significant difficulties, mostly related to the institutions carrying out the projects. Inadequate funding made it difficult to pay the M&E commission's fees and to make it easier for them to move among the project implementation regions, which was classified as one of the institutional determinants of effective participatory M&E. The M&E function was greatly hindered by institutional issues, which resulted in poor M&E activity implementation and ultimately had an impact on how well the country's projects performed. Nzigu and Karanja's (2018) study focused on the role that evaluation play in Uganda's carefully designed apartment buildings. M&E, according to the experts, had a considerable impact on how well these builders performed, but despite its clear significance, the bulk of items lacked a robust M&E function. An examination of the numerous projects revealed that the bulk of the county's gated developmental projects lacked funding for the M&E function.

### **3.0 Research Methodology**

The study employed descriptive and correlation research designs. The study used 133 people as target population. The study conducted a census. Questionnaire and guided interview were used as data collection instruments. Stratified sampling was used as sampling technique. The simple random sampling technique was used to the respondents of each stratum. The validity of the research instrument was maintained by distributing the research instruments to the expert respondents in the area of the study. The IBM SPSS software version 21 was used in data management. The inferential statistics like multiple regression analysis was used to indicate the influence of project management practices on project performance and T test was used to find out degree of association between variables. On the other hand, the qualitative data that was collected using interview guide and analyzed using thematic analysis by grouping responses into respective similar themes.

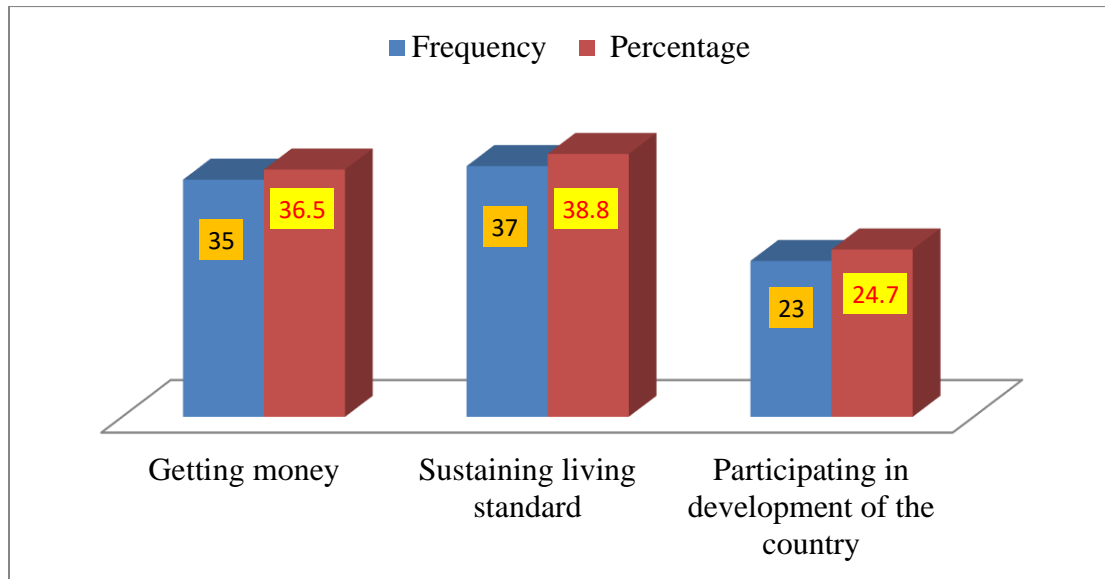
#### 4.0 Research Findings

The study sought to investigate the influence of project management practices on performance of public construction projects in Kamonyi District in Rwanda.

##### 4.1 Project planning and project performance

The summary of the responses on the purpose of starting a project is presented in Figure 1

**Figure 1: Responses on the purpose of starting a project**



The study was motivated to collect the data from respondents to get the purpose of starting the project. The study found that majority of 38.8% of respondents participates in construction project for the purpose of sustaining their living standard. This implies that focusing on the living standard could cause poor project planning. This was followed by 36.5% of respondents indicated that they start the project of construction for the purpose of getting money. This could also affect the effective project planning in case getting money is the main target. The study also found that the respondents start the construction project for the purpose of participating in development of the country. This implies that minority of construction employees (contractors, Engineer) sector and District Engineer) do not conduct the construction project for their own interest rather the community interest which can lead to poor project planning. According to a 2017 International Bank Report, international leaders and governments are beginning to understand how crucial methodologies are to achieving project objectives.



**Table 1: Responses Perception of project plan**

Statements Perception of responses project plan	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	Standard Deviation
	%	%	%	%	%		
We have clear project objective	23.5	37.6	10.6	16.5	11.8	2.55	1.33
Our written plan, shows when all activities should be performed	17.6	18.8	15.3	34.1	14.1	3.08	1.34
Our project plan also shows how the money is allocated on every construction activity	23.5	28.2	9.4	28.2	10.6	2.74	1.37
Project instructors have clear days and time allocated to visit the performance of project.	9.4	20.0	9.4	32.9	28.2	3.51	1.34
The risks that are always expected are also indicated in the plan.	18.8	37.6	9.4	22.4	11.6	2.70	1.32
The plan also shows how the risks will be dealt with if they occur.	23.5	19.8	14.0	27.9	14.0	2.89	1.41

The study was also motivated to find out the scales associated with project planning among construction employees (contractors, Engineer) sector and District Engineer in Kamonyi district. The study revealed that majority with the mean of 3.51 and 1.34 of standard deviation corresponding with 61.1% agree the project instructors make a regular visit. This means that the owner of the project makes effective control about the project. The project schedule, which concentrates that should be carried out to obtain the project results or deliverables, is created by the functional departmental manager throughout the planning process (Taylor, 2016). It was also followed by respondents scaled on the mean of 3.08 and 1.34 of standard deviation scaling with 48.2% of the respondents agreed that there is a given guideline related to the time the planned activities will be performed. This indicates that majority of project constructors do not mention the time to complete the project which lead to the misuse of resources and the failure of the project. In Naeem, et al., (2018) reveal that the make effective risk management’s mediating role. Similarly, the study found that the respondents with the mean of 2.89 and 1.41 of standard deviation scaling with 41.9% agreed that the planers of the project in Kamonyi district show how the found mistakes could be mitigated.

This implies that constructors performing the projects do not plan for mitigation measures which could protect the project to fail. On the other hand, the study found that the respondents with the mean of 2.74 and 1.37 of standard deviation scaled at 38.8% agreed that while planning the project,

they indicate how the money is allocated. It was also found that the respondents with the mean of 2.70 and 1.32 of standard deviation scaled at 34% agreed that the expected risks are planned in the project while the respondents with the mean of 2.55 and 1.33 of standard deviation scaled at only 28.3% agreed that they have a clear objective that could guide. The projects performed do not clear of objectives and guidelines which create poor project practices, management and performance.

In the interview conducted in March 2022 with one of the project managers at district level and sector civil engineers and they were interviewed on project planning. *Majority of respondents explained that “they don’t adequately plan for their construction project which sometime affects the level performance. They also explain the cause of poor planning is due to having insufficient time to plan for those projects. In addition to this, the respondents explained that the lack adequate knowledge and skills associated with project planning come closer to making poor planning”. The respondents explained that “majority of the conducted projects do not get completed at the planned time due to facing challenges in implementation face is also considered to be one of the factors of poor planning. The respondents suggested that if they get profession training based on planning of construction project could be an added value to them”.*

#### 4.2 Project implementation and project performance

This study also presents the project implementation responses that were presented basing on the items that were given to students. The responses are presented in form of Likert scale and results are interpreted using mean and standard deviation.

**Table 2: Responses on project implementation**

Statements Perception of responses project plan	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	Standard Deviation
	%	%	%	%	%		
One need to obtaining the required resources before starting a project	5.5	10.2	7.0	25.0	52.3	4.09	1.223
Resources are used at the right time and correctly	4.7	8.6	7.0	32.0	47.7	4.09	1.223
Activities are done as planned	5.5	12.5	14.1	33.6	34.4	3.79	1.201
Resources are allocated depending on the size	4.7	7.0	15.6	43.0	29.7	3.86	1.070
There is effective management of the project	6.3	10.2	12.5	47.7	23.4	3.72	1.122
The plan also shows how the risks will be dealt with if they occur.	2.3	4.7	14.1	35.2	43.8	4.13	0.983

Source: Primary data (2022)

The study collected the data from the respondents and the questions were related to the project implementation. The study found that the 52.3% of respondents strongly disagreed 25.0% disagreed, 7% neither agreed nor disagree ,10.2 % agree and 5.5% strongly 5.5% with the mean of 2.74 and 1.37 of standard deviation scaled at 38.8% agreed that one need to obtain the required resources before starting a project with mean 4.09 with standard deviation. On statement that resources are used at the right time and correctly a project study 47.7% of respondents strongly disagreed 32.0% disagreed, 7% neither agreed nor disagree ,8.6 % agree and 4.7% strongly agree with the mean of 4.09 and standard deviation of 1.223. On the statement that activities are done as planned, 34.4% of respondents strongly disagreed 33.6% disagreed, 14.1% neither agreed nor disagree ,12.5 % agree and 5.5% strongly agree with the mean of 3.79 and standard deviation of 1.201. On the statement that resources are allocated depending on the size 4.7% of respondents strongly disagreed 32.0 % disagreed, 7.0% neither agreed nor disagree ,4.7 % agree and 8.6% strongly agree with the mean of 4.09 and standard deviation of 1.223.

On the statement there is effective management of the project 23.4% of respondents strongly disagreed 47.7% disagreed, 12.5% neither agreed nor disagree ,10.2 % agree and 6.3% strongly. It can be concluded there is the provision of the required resources to be used before starting the project. This implies majority take care of the implementation of the project through allocating the needed resources to start the project. This implies that a high-rate construction project makes effective implementation due to respective time to use the available resources and them correctly which may also leads to the effective project performance. According to Walker and Hughes (2019), enhancing the project environment is also important and is recognized to have an impact on numerous elements that affect how well projects execute.

In interview conducted in March 2022 with one of the project managers at district level and sector civil engineers and they were interviewed on project implementation. *The respondents indicated that “before implementation phase of the construction project, they get some recommendation related with how the project activities could be implemented. Though, majority of the respondents indicated that their project managers most of time are not adequately skilled to making effective implementation of the planned activities thus lead to the project to fail or to provide inequality standard. The respondents suggested that it could be better when all constructors get a workshop related to how the project activities could conducted and get what is desired in the projects which also help them to make effective project implementation”.*

#### **4.3 Project Monitory and Evaluation**

This study also presents the project monitoring responses that were presented basing on the items that were given to students. The responses are presented in form of Likert scale and results are interpreted using mean and standard deviation.

**Table 3: Responses on project monitoring and evaluation**

Statements Perception of responses project plan	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	Standard Deviation
	%	%	%	%	%		
Project is checked regularly by manager	22.4	35.3	9.4	18.8	14.1	2.67	1.38
there is a clear record on activities done	9.4	4.7	18.8	48.2	18.8	3.62	1.13
There is a regular project coordination	23.5	28.2	9.4	28.2	10.6	2.74	1.34
Supervisors ensure the planned activities are well done	11.8	16.5	4.7	34.1	32.9	3.60	1.39
Project bring management offices closer activities	10.6	16.5	4.7	37.6	30.2	3.61	1.35

The study was motivated to get the data from respondents about rate of project monitoring and evaluation. It was found that majority of the man of 3.62 and 1.13 of standard deviation scaling with 67% of respondents agreed that there found a clear record related to the performed activities while the mean of 3.61 and 1.35 of standard deviation corresponding with 67.8% of respondents agreed that the conducted project bring management offices closer especially on the performed activities. This implies that construction employees (contractors, Engineer) sector and District Engineer take care of their project as they need to reach the achievement. According to Monterrey (2012), tracking systems by society organizations are a crucial project management technique that affects all of the project's planning and execution operations.

Similarly, the respondents with mean of 3.60 and 1.39 of standard deviation corresponding with 67% agreed that their supervisors ensure that the planned activities are well done. This implies that a number of supervisors consider the project activities and take care of them to reach out the standard activities. Project monitoring and evaluation (M&E), according to Harrison (2018), entails the "regular gathering and examination of data to follow the project status. The study also found that the respondents with the mean of 2.74 and 1.34 of standard deviation corresponding with only 38.8% agreed that there is regular project coordination with the performed projects while the mean of 2.67 and 1.38 of standard deviation corresponding with only 32.9% agreed that the project managers check regularly the performance of its activities. This implies that majority of project managers do not make effective project management and evaluation which could cause the project to fail.

In the interview conducted in March 2022 with one of the project managers at district level and sector civil engineers and they were interviewed. *The respondents revealed that "the project manager is the one responsible to check the project progress which also done as an act of project monitoring and evaluation where the manager checks how every was done in the project. The respondents also added that majority of project manager get delayed to check the progress of*

project performance which most of the time lead poor implementation. They also added that the inadequate project monitoring and evaluation in Kamonyi District sometimes lead to the lack of project goal attainment and quality achievement.”

#### 4.4 Project performance

This study also presents the project performance responses that were presented basing on the items that were given to students. The responses are presented in form of Likert scale and results are interpreted using mean and standard deviation.

**Table 4: Responses on project performance**

Statements Perception of responses on project performance	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	Standard Deviation
	%	%	%	%	%		
There is a high level of quality service delivery	6.3	16.4	20.3	37.5	19.5	3.48	1.164
Timely delivery of project deliverables	15.6	38.3	18.8	18.8	9.4	2.68	1.216
There is a lack of work revision	16.4	18.8	12.5	21.9	30.5	3.31	1.484
Delivery of the projects within budget signal successful the projects	10.9	23.4	15.6	25.8	24.2	3.29	1.352
Construction of projects get completed on time as planned	5.5	12.5	14.1	33.6	34.4	3.79	1.201

The study was motivated to get the data to get data from the construction employees (contractors, Engineer) sector and District Engineer in Kamonyi district to check the project performance can be scaled. The study found that 19.5% of respondents strongly disagreed 37.5 % disagreed, 20.3% neither agreed nor disagree, 16.4 % agree and 6.3% strongly agree with the mean of 3.48 and standard deviation of 1.164 that delivery of the projects within budget signal successful the projects. This implies that the delivery of the project which determines the project performance is not yet meeting the high scale of project performance. According to Kezner (2017), a project is considered to be functioning when it has successfully used the given resources to fulfill the project objectives while staying on schedule, within budget, and at the established current performance.

On the statement 9.4% of respondents strongly disagreed 18.8 % disagreed, 18.8% neither agreed nor disagree, 38.3 % agree and 15.6% strongly agree with the mean of 2.68 and standard deviation of 1.216. This implies that timely delivery of project deliverables is not at a high level which could significantly be influenced by the status of project management. On the statement that Delivery of the projects within budget signal successful the projects 24.2% of respondents strongly disagreed 25.8 % disagreed, 15.6% neither agreed nor disagree ,23.4 % agree and 10.9% strongly agree with the mean of 3.29 and standard deviation of 1.352. On the statement that construction of projects get completed on time as planned 34.4% of respondents strongly disagreed 33.6 % disagreed,

<https://doi.org/10.53819/81018102t50104>

14.1% neither agreed nor disagree, 12.5 % agree and 5.5% strongly agree with the mean of 3.79 and standard deviation of 1.201. This implies that the lack of revision for the work done can cause a challenge to the project performance. Burke (2019) offers a more up-to-date definition of productivity as project success, which includes finishing the project inside the allotted time and money.

#### 4.5 Inferential Statistic

##### 4.5.1 Correlation Analysis

Correlation analysis involves determining the degree and direction of association between two variables. Pearson Correlation was applied to establish the relationship influence of project management practices (project planning, project implementation and project monitoring and evaluation on performance of construction project in Kamonyi district in Rwanda) on performance of public construction projects in Kamonyi District in Rwanda. This study conducted correlation between the project management practices and performance of public construction projects in Kamonyi District in Rwanda.

**Table 5: correlation between the project management practices and performance of public construction projects in Kamonyi District in Rwanda.**

		Performance	project planning	project implementation	monitoring & evaluation
Performance	Correlation coefficient	1.00			
	Sig-(2-tailed)				
	N	95			
project planning	Correlation coefficient	0.350	1.00		
	Sig-(2-tailed)	0.003	0.04		
	N	95	95		
project implementation	Correlation coefficient	0.437	-0.128	1.00	
	Sig-(2-tailed)	0.00	0.003	0.005	
	N	95	95	95	
monitoring & evaluation	Correlation coefficient	0.484	-0.07	0.847	1.00
	Sig-(2-tailed)	.000	0.002	0.000	
	N	95	95	95	

The study showed that project planning, project implementation and project monitoring and evaluation had moderate positive significance relationship ( $r=.437$   $p=0.000$  ( $r=0.350$ ,  $p=0.03$ ) and ( $r=0.484$   $p=0.00$ ) respectively with performance of construction project in Kamonyi district in Rwanda respectively

#### 4.5.2 Regression analysis

The model summary results are presented in Table 6

**Table 6: Model Summary of project management practices and performance of public construction projects in Kamonyi District in Rwanda.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847 <sup>a</sup>	.752	.631	0.31383

a. Predictors: (Constant), Project planning, project implementation and project monitoring

b. Dependent Variable: Performance

The variables Project planning, project implementation and project monitoring and evaluation contribute 63.1% influence on construction project performance in Kamonyi district. This also implies that the project implementation is ready to affect the construction project performance and remaining 36.9% can be influenced by other variables. R is the correlation coefficient which shows the relationship between the study variables. The findings show that there was a strong positive relationship between the study variables as shown by 0.847.

#### 4.6 Hypotheses

The summary of research hypothesis decisions is depicted in Table 7

**Table 7: Summary of research Hypothesis decisions**

Research Hypotheses	$\beta$ coefficient	P value.	Decision on H <sub>0</sub>
<b>H<sub>01</sub>:</b> There is no significant influence of project planning and performance of public construction projects in Kamonyi district in Rwanda.	b=.0.149	p=.137	Rejected
<b>H<sub>02</sub>:</b> There is no significant relationship between project implementation and performance of public construction projects in Kamonyi district in Rwanda	b=0.268	p=.004	Fail o Rejected
<b>H<sub>03</sub>:</b> There is no significant influence of project monitoring and evaluation and performance of public construction projects in Kamonyi district in Rwanda.	b=1.466	P=.000	Fail Rejected

Results in Table 7 shows that the first hypothesis was; **H<sub>01</sub>:** There is no significant influence of project planning and performance of Public construction projects in Kamonyi district in Rwanda had P value= 0.137 was greater than 0.05 hence rejected null hypothesis and concluded there is no significant influence of project planning and performance of Public construction projects in Kamonyi district in Rwanda. Third hypothesis **H<sub>03</sub>:** There is no significant influence of monitoring and evaluation and performance of Public construction projects in Kamonyi district in Rwanda had P value= 0.00 was less than 0.05 hence we fail to rejected null hypothesis and concluded

there is significant influence of monitoring and evaluation and performance of Public construction projects in Kamonyi district in Rwanda.

### **5.0 Summary of findings and Conclusion**

The purpose of this paper was to investigate the influence of project management practices on performance of the public construction projects in Kamonyi District in Rwanda. The findings revealed that majority, 38.8% of the respondents participates in construction project for the purpose of sustaining their living standard. It was also found that majority, 78.8% of the respondents do not make a written project plan. The study also found that majority agreed there is the provision of the required resources to be used before starting the project. The variables like resource acquisition, resource organization and risk mitigation that make project implementation were found to influence the construction project performance at 35.2% and the remaining 64.8% can be affected by other variables. The study further found that the project monitoring and evaluation affect the construction project performance at 26.7% and the remaining 73.3% can be affected by other variables. The study concluded that making effective practices associated with project management enhances the performance of the project. On the other hand, the poor project management and practices could proportionally reduce the level of project performance.

### **6.0 Recommendations**

Based on the findings of the study, the following recommendations were made;

1. To enhance the performance of construction projects, managers of various companies that sponsor them should constantly adapt management practices.
2. To assist in educating engineers in community-based organizations so they can produce higher-quality construction projects, the government and NGOs should expand their extension services.
3. In order to determine the projects' strengths and weaknesses, management and project sponsors should both analyze initiatives. This will be of great help in planning future initiatives that would be based on historical data.
4. In order to estimate the contingency funds set aside for risks, the management should also incorporate anticipated risks in their project plan that they have encountered on the job during monitoring sessions.

### **Acknowledgments**

The success of my study is made possible due to great contribution of several people to whom I am grateful for. I am grateful to my supervisor **Dr Nkechi Irechukwu Eugenia** for his wise counsel and guidance while I am writing this research Project. I wish to extend my sincere thanks to all lectures of Mount Kenya University who in one way or another helped me to achieve all that I have achieved academically. Furthermore, I thank my classmates who were very helpful and generously contributed constructive ideas towards this research Project. I also appreciate the effort of each and every one not mentioned here but sincerely contributed to the fulfillment of this research; the almighty God rewards you abundantly.



## REFERENCES

- Abdul-Rahman, W., Kadir, M.R.A., Salim, A., & Ernawati (2016). The significant factors causing delay of building construction projects in Malaysia. *Engineering, Construction and Architectural Management*, 14(2), 192- 206. <https://doi.org/10.1108/09699980710731308>
- Adeyemi, I. (2013). Effects of Project Management on the Performance of a Construction Firm in Nigeria. *American International Journal of Contemporary Research*, 3(6), 54- 58.
- Arslan, G., & Kivrak, S. (2014). Critical Factors to company success in the construction industry. *International Journal of Human and Social Sciences*, 4(8), 561-564.
- Burke, S. P. G. (2019). Project Leadership and Quality Performance of Construction Projects. *International Journal of Built Environment and Sustainability*, 4(2), 45-72.
- Christen, R.P., & Pearce, D. (2015). *Managing Risks and Designing Products for Agricultural Microfinance*. Rome: International Fund for Agricultural Development.
- Chua, D., Kog, Y. & Loh, K. (2013). Critical success factors for different project objectives. *Journal of Construction Engineering Management*, 125(3), 142–150. [https://doi.org/10.1061/\(ASCE\)0733-9364\(1999\)125:3\(142\)](https://doi.org/10.1061/(ASCE)0733-9364(1999)125:3(142))
- Crivelli, E., & Gupta, S. (2013). Resource blessing, revenue curse? Domestic revenue effort in resource-rich countries. *European Journal of Political Economy*, 35, 88-101. <https://doi.org/10.1016/j.ejpoleco.2014.04.001>
- Dwyer, T. & Black, E. (2017). *A practical Guide to the Financial Management*. NGOs. John Meinert printers. Windhoek.
- Elisante, A. R. (2018). Process improvement for power plant turnaround planning and management. *Architecture, Engineering and Construction journal*, 1(6), 8-28.
- Grisham, T. (2016). *Cross Cultural Leadership*. School of Property, Construction and Project Management. Melbourne, RMIT.
- Harrison, F. L. (2018). *Advanced project management: a structured approach*. Gower Publishing, Ltd. <https://doi.org/10.4324/9781315263328>
- Harvey, K. (2015). *Project management professional*. San Francisco, CA: Sybex, Inc.
- Joe, W. & Nay, L. (2014). Project Management Cycle Guidelines. *European Journal of Political Economy*, 3(5), 88-101.
- Kezner, H. (2017). *Project management: A system approach to planning, scheduling and controlling*. Van Nostrand Reinhold. New york.
- Kihoro, M. W., & Waiganjo, E. (2015). Factors affecting performance of projects in the construction industry in Kenya: A survey of gated communities in Nairobi County. *Strategic Journal of Business and Change Management*, 2(2), 37-66.
- Landau, S. (2010). *Socio-economic determinants of climate change impacts*. Prepared for the United Nations Development Program, UNDP-Bratislava Regional Center.
- Landman, S. (2012). *Strategic planning for project management using a project management maturity model*. International Institute for Learning New York, New York
- Mambo, S. & Charagu, K. (2013). Collapse of Road Construction Structures. *IEK presentation*, 2009.
- Maylor, A. S. (2015). An Investigation into Factors Causing Delays in Road Construction Projects in Kenya. *American Journal of Civil Engineering*, 3(3), 51-63. <https://doi.org/10.11648/j.ajce.20150303.11>

- Meredith, J.R., & Montel, S.J. (2010). *Project Management: A managerial approach*. Asia. John Willey & Sons Inc
- Miller, C.G. & Lessard, R.C. (2006). *Modern Project Management*. New Age International (P) Ltd Publishers
- Mutegi, A. S. (2015). An Investigation into Factors Causing Delays in Road Construction Projects in Kenya. *American Journal of Civil Engineering*, 3(3), 51-63. <https://doi.org/10.11648/j.ajce.20150303.11>
- Naeem, S., Khanzada, B., Mubashir, T. & Sohail, H. (2018). Impact of Project Planning on Project Success with Mediating Role of Risk Management and Moderating Role of Organizational Culture. *International Journal of Business and Social Science*, 9(1), 88-98.
- Ngatia, W. (2016). Institutional determinants of participatory monitoring and evaluation systems implementation among community-based development projects in Kibera Slum, Kenya. *International Journal of Economics, Commerce and Management*, 3(11), 375.
- Nicolus, A. (2018). The critical success factors influencing project performance in Nigeria. *International Journal of Management Science and Engineering Management*. 6(5)343-349. <https://doi.org/10.1080/17509653.2011.10671182>
- Nyende, A. (2011). *Building Network for market Access*, Rome, Government cooperative Program.
- Pascal, T. (2020). Factors affecting time and cost performance of construction projects in Rwanda. *International Journal of Project Management*. 2(1), 1-17.
- Pinto, G., & Slevin, S. (2018). Critical Factors to company success in the construction industry. *International Journal of Human and Social Sciences*, 4(8), 561-564
- Republic of Kenya (2015). MSMS competitiveness project: improving business environment component: baseline survey report.
- Skeggs, B. (2011). Values beyond value? Is anything beyond the logic of capital?. *The British Journal of Sociology*, 65(1), 1-20. <https://doi.org/10.1111/1468-4446.12072>
- Slaymaker, A. & Chapman, N. (2012). Time delay and cost overrun in Qatari public construction projects. *Procedia engineering Journal*, 164, 368-375. <https://doi.org/10.1016/j.proeng.2016.11.632>
- Ssekandi, R & Chen, C. (2010). *Agricultural modernization programme of Uganda*, <https://relief.web.int/report/Uganda/u>, retrieved on 5th March 2018
- Taylor, J. (2006). *A survival Guide for Project Managers*.
- Turner, J. R. (2016). International Project Management Association global qualification, certification and accreditation. *International Journal of Project Management*, 14(6), 1- 6.
- Tuyishime, T. (2020). Factors affecting time and cost performance of construction projects in Rwanda. *International Journal of Project Management*, 2(5), 354-387.
- Walker, A. & Hughes, S. (2019). *Project Management in Construction (second ed.)* BSP Professional Books, Oxford.
- World Bank (2018), *Ghana 2003 Country Procurement Assessment Report*, Ghana Country Department, World Bank, Washington, DC
- World Bank (2017). *Updating the Bank's Operational Policy on Monitoring and Evaluation*. Operations and Country Service. Washington, D.C.